

January 30, 2018

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TESORO

Tesoro Refining & Marketing Company LLC
150 Solano Way
Martinez, CA 94553-1487

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BAY AREA AIR QUALITY
MANAGEMENT DISTRICT

Mr. Wayne Kino
Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California 94105

SUBJECT : Tesoro Martinez Refinery Title V Semi-Annual Monitoring Report
Reporting Period: July 1, 2017 to December 31, 2017
Plant #B2758 & #B2759

Dear Mr. Kino:

Pursuant to the requirements outlined in Section I, Standard Conditions, Part F. of the Tesoro Refining and Marketing Company Title V Permit, issued on January 11, 2016, the attached document includes information for the above reference reporting period. The Semi-Annual Monitoring report consists of two parts. The first part summarizes all of the Inoperative Monitors reported for the reporting period; the second part summarizes all the Title V deviations reported for the reporting period. This Title V Semi-Annual Monitoring Report contains the signature of Tesoro's responsible official, Mr. Thomas A. Lu, as required by Regulation 2-6-502, and by 40 CFR Part 70.6.

For questions, please contact David Chetkowski of my staff at (925) 335-3451.

Sincerely,

Matthew W. Buell
Manager, Environmental

MWB/DMC/kds

Attachment

cc: Mr. Ray Salilila, BAAQMD Enforcement Inspector (E-mail)

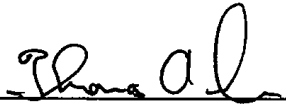
Tesoro Martinez Refinery
Inoperative Monitors
Reporting Period: 7/1/2017 to 12/31/2017

Inoperative Monitors as defined by BAAQMD Regulations 1-522 and 1-523
for the reporting period are summarized below:

Date	IMF ID#	Unit	Pollutant / Parameter
7/28/2017	07E02	Furnace F-22	NO _x
8/11/2017	07E11	Furnaces F-55 and F-56	NO _x
9/14/2017	07E58	ARU Flare	Flowrate
9/24/2017	07E69	Furnace F-79	NO _x
10/8/2017	07E80	6 Boiler	SO ₂
11/8/2017	07F32	Furnace F-16	NO _x
11/22/2017	07F47	Furnace F-50	NO _x
11/23/2017	07F45	6 Boiler	SO ₂
12/1/2017	07F57	Furnaces F-53 and F-54	NO _x
12/25/2017	07F80	Furnace F-22	NO _x

Certification Statement

I certify under penalty of law that based on the information and belief formed after reasonable inquiry, the statements and information in this document and in all attachments and other materials are true, accurate and complete



Signature of Responsible Official

mwb

Vice President, Martinez Refinery

Title

1/26/2018

Date

BAAQMD Title V Permit Semi-Annual Monitoring Report					
July-17 -- December-17					
B2758 & B2759 -- Tesoro Martinez Refinery and Amcorco Terminal					
<u>Facility Address:</u> 150 Solano Way			<u>Mailing Address:</u> 150 Solano Way		
City: Martinez	State: CA	Zip Code: 94553	City: Martinez	State: CA	Zip Code: 94553
<u>Contact:</u> Matthew Buell	<u>Title:</u> Environmental Manager	<u>Phone:</u> 925 - 370 - 3275			
Applicable Regulation / Permit Condition / Other: <u>Title V-VI(24323)</u>					
Date Event Started:	Date Event Stopped:	Source (S#):	Abatement Device (A#):	Emission Point (P#):	
<u>01/06/2017</u>	<u>01/06/2017</u>	<u>S1524</u>			
<p>Event Description: During maintenance activity of cleaning a "Y" strainer in the natural gas supply line for the pilots on the 50 Unit flare, the refinery fuel gas valve opened to the pilots on the 50 Unit flare. The pilots were returned to natural gas service after maintenance of the "Y" strainer was completed, ending the curtailment of natural gas to the pilots. NOV A56253 was issued on 10/26/2017.</p> <p><u>Probable Cause:</u> At approximately 10:02 hours on 1/5/2017, Operators isolated the natural gas line to the flare pilots to allow maintenance of a natural gas "Y" strainer. Fuel gas was temporarily supplied to the flare pilots during the natural gas curtailment to ensure that the pilots remained lit so that this critical safety device remained capable of operation.</p> <p><u>Corrective Action or Preventive Steps Taken:</u> The "Y" strainer was cleaned and returned to service, and the natural gas line to the flare pilots was returned to service. A natural gas bypass was installed around the "Y" strainer, which will allow the "Y" strainer to be bypassed during future maintenance activities. The bypass will prevent future curtailment of natural gas to the pilots.</p>					
Applicable Regulation / Permit Condition / Other: <u>BAAQMD 1-522(4)</u>					
Date Event Started:	Date Event Stopped:	Source (S#):	Abatement Device (A#):	Emission Point (P#):	
<u>04/15/2017</u>	<u>04/20/2017</u>	<u>S1401, A1402</u>		<u>A1525</u>	
<p>Event Description: Late reporting of an inoperative monitor. During a review of collected 2Q 2017 CEMS data, it was discovered that daily calibrations were not performed for the Sulfur Recovery Unit (SRU) SO2 CEMS because the analyzer was in maintenance mode. The inoperative monitor was reported to the District on 7/25/2017 as RCA 07D98. NOV A56254 was issued on 10/26/2017.</p> <p><u>Probable Cause:</u> The reporting of the inoperative monitor was late because Environmental was not notified that the monitor missed calibrations.</p> <p><u>Corrective Action or Preventive Steps Taken:</u> Automated email alerts will be created which will notify responsible individuals, including Environmental, if the monitor remains in maintenance mode for more than 24 hours, or if the monitor has not undergone calibration in more than 24 hours.</p>					

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301Date Event
Started:Date Event
Stopped:07/07/201707/07/2017Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: A brief period of elevated ambient H₂S concentration was monitored at the Waterfront Rd GLM location, as reported to the Air District on 7/11/2017 as RCA 07D82. Winds were calm and blowing from the tidally influenced wetlands located adjacent to the GLM site.

Probable Cause:

The monitored wind direction immediately preceding and during the period of excess indicates that the H₂S originated offsite from the tidally influenced wetlands adjacent to the GLM, and that the Refinery did not emit the H₂S that caused the recorded excess.

Corrective Action or Preventive Steps Taken:

No corrective action taken. The collected meteorological data and GLM data indicate that the H₂S was not emitted by the Refinery.

Applicable Regulation / Permit Condition / Other:

Title V-VI(24323)Date Event
Started:Date Event
Stopped:07/16/201707/16/2017Source (S#): S1524

Abatement Device (A#):

Emission Point (P#):

Event Description: During maintenance activity of cleaning a "Y" strainer in the natural gas supply line for the pilots on the 50 Unit flare, the refinery fuel gas valve opened to the pilots on the 50 Unit flare. The pilots were returned to natural gas service after maintenance of the "Y" strainer was completed, ending the curtailment of natural gas to the pilots. NOV A56227 was issued on 10/26/2017.

Probable Cause:

At approximately 0840 hours on 7/16/2017, Operators isolated the natural gas line to the flare pilots to allow maintenance of a natural gas "Y" strainer. Fuel gas was temporarily supplied to the flare pilots during the natural gas curtailment to ensure that the pilots remained lit so that this critical safety device remained capable of operation.

Corrective Action or Preventive Steps Taken:

The "Y" strainer was cleaned and returned to service, and the natural gas line to the flare pilots was returned to service. A natural gas bypass was installed around the "Y" strainer, which will allow the "Y" strainer to be bypassed during future maintenance activities. The bypass will prevent future curtailment of natural gas to the pilots.

Applicable Regulation / Permit Condition / Other:

BAAQMD 1-522(4)Date Event
Started:Date Event
Stopped:08/11/201708/14/2017Source (S#): A31, A31

Abatement Device (A#):

Emission Point (P#):

Event Description: Late reporting of an inoperative monitor. The NO_x monitor for the F55/F56 stack flat-lined. The inoperative monitor was reported as RCA 07E11. NOV A56255 was issued on 10/26/2017.

Probable Cause:

Environmental Department did not receive timely notification that the monitor had malfunctioned and needed to be repaired.

Corrective Action or Preventive Steps Taken:

Environmental Department provided training to the analyzer shop on 8/22/2017 to explain BAAQMD requirements and expectations, and to reinforce the refinery's internal and external reporting expectations.

Applicable Regulation / Permit Condition / Other:
Title V-VI(11433)(2B), BAAQMD 6-1-302

Date Event Started: 08/23/2017 Date Event Stopped: 08/23/2017 Source (S#): S802 Abatement Device (A#): A30, S901 Emission Point (P#):

Event Description: Opacity exceeded 20% for more than 3 minutes in any hour during an unexpected shutdown of the FCCU. Opacity again exceeded 20% for more than 3 minutes in any hour as torch oil was introduced into the FCCU during restart. Reported to the District as RCA 07E23. NOV A56271 was issued on 1/12/2018.

Probable Cause:

Safety systems de-energized the ESP when FCCU unexpectedly shutdown. The introduction of torch oil into the FCCU briefly caused an increase in opacity during unit restart.

Corrective Action or Preventive Steps Taken:

Opacity returned to normal following the unexpected shutdown upon restart of the ESP, once all safety permissives were met. Opacity returned to normal following the introduction of torch oil into the FCCU once system operating parameters equilibrated.

Applicable Regulation / Permit Condition / Other:
Title V-VI(8077)(B7)(A)

Date Event Started: 08/23/2017 Date Event Stopped: 08/23/2017 Source (S#): Abatement Device (A#): A908 Emission Point (P#): S908, S1470

Event Description: An indicated NOX emissions excess for Furnace F8/F71 (S-908 and S-1470) was reported to the District on 8/23/2017 as RCA 07E22.

Probable Cause:

During a steam outage and upset, F-8 shut down briefly, and during furnace restart the chopper valve on the ammonia flow feed did not respond. Ammonia flow to the SCR was blocked by the chopper valve resulting in excess NOX emissions.

Corrective Action or Preventive Steps Taken:

Ammonia flow control to the SCR was restored when the chopper valve controller was repaired, allowing the valve to open.

Applicable Regulation / Permit Condition / Other:
BAAQMD 6-1-302, Title V-VI(11433)(2B)

Date Event Started: 08/24/2017 Date Event Stopped: 08/24/2017 Source (S#): S802 Abatement Device (A#): A30, S901 Emission Point (P#):

Event Description: Opacity exceeded 20% for more than 3 minutes in a one-hour period. The excess was reported as RCA 07E24. NOV A56272 was issued on 1/12/2018.

Probable Cause:

While adjusting fuel gas pressure on the center burner of 7 Boiler, safety systems installed during the recent turnaround automatically shut down the boiler, which in turn automatically de-energized the ESP to prevent explosion. Contributing factor: the boiler underwent modification during turnaround, including the installation of new burners and associated controls. Fuel gas pressure was being adjusted as part of the initial startup/shakedown of the boiler and its newly installed burner systems.

Corrective Action or Preventive Steps Taken:

As soon as safety permissives were met, the boiler burners were lit and the ESP was re-energized. Opacity returned to normal levels as soon as the ESP was re-energized.

Applicable Regulation / Permit Condition / Other:

Title V-VI(11433)(2B), BAAQMD 6-1-302

Date Event
Started:

Date Event
Stopped:

08/26/2017

08/26/2017

Source (S#): S802

Abatement Device (A#): A30, S901

Emission Point (P#):

Event Description: Opacity from the FCCU / 7 Boiler stack exceeded 20% for more than 3 minutes in a one-hour period. The excess was reported to the District on 8/28/2017 as RCA 07E29. 7 Boiler was not operating at the time this event occurred. The FCCU was operating at minimum rates. The District determined that No Further Action (NFA) was required on 10/19/2017.

Probable Cause:

The 7 Boiler fuel gas chopper valve was being tested prior to restart of 7 Boiler. The test of the chopper valve triggered the automatic shutdown of the ESP.

Corrective Action or Preventive Steps Taken:

The ESP was re-energized 3 minutes later, after all safety permissives were met.

Applicable Regulation / Permit Condition / Other:

Title V-VI(8077)(B7)(A)

Date Event
Started:

Date Event
Stopped:

08/26/2017

08/26/2017

Source (S#): S908, S1470

Abatement Device (A#): A908

Emission Point (P#):

Event Description: An indicated NOX emissions excess for Furnace F8/F71 (S-908 and S-1470) was reported to the District on 8/28/2017 as RCA 07E28.

Probable Cause:

NOX analyzer malfunction led to erroneous reporting of excess emissions because the analyzer was believed to be operating normally. On three consecutive days (Aug 26-28), the analyzer readings drifted overnight. As analyzer readings drifted, NOX emissions were believed to be rising. Furnace operating parameters remained unchanged during the periods of indicated excess, leading operations to suspect that the analyzer was malfunctioning each night.

Corrective Action or Preventive Steps Taken:

After calibration failed on the morning of August 29, the ozonator, capillaries, converter, and associated tubing were all replaced, and the analyzer was calibrated. NOX values no longer drifted overnight following repair of the analyzer, confirming that the excess emissions were erroneous.

Applicable Regulation / Permit Condition / Other:

Title V-VI(8077)(B7)(A)

Date Event
Started:

Date Event
Stopped:

08/27/2017

08/27/2017

Source (S#): S908, S1470

Abatement Device (A#): A908

Emission Point (P#):

Event Description: An indicated NOX emissions excess for Furnace F8/F71 (S-908 and S-1470) was reported to the District on 8/28/2017 as RCA 07E30.

Probable Cause:

NOX analyzer malfunction led to erroneous reporting of excess emissions because the analyzer was believed to be operating normally. On three consecutive days (Aug 26-28), the analyzer readings drifted overnight. As analyzer readings drifted, NOX emissions were believed to be rising. Furnace operating parameters remained unchanged during the periods of indicated excess, leading operations to suspect that the analyzer was malfunctioning each night.

Corrective Action or Preventive Steps Taken:

After calibration failed on the morning of August 29, the ozonator, capillaries, converter, and associated tubing were all replaced, and the analyzer was calibrated. NOX values no longer drifted overnight following repair of the analyzer, confirming that the excess emissions were erroneous.

Applicable Regulation / Permit Condition / Other:

Title V-VI(8077)(B7)(A)

Date Event
Started:

Date Event
Stopped:

08/28/2017

08/28/2017

Source (S#): S908, S1470

Abatement Device (A#): A908

Emission Point (P#):

Event Description: An indicated NOX emissions excess for Furnace F8/F71 (S-908 and S-1470) was reported to the District on 8/29/2017 as RCA 07E33.

Probable Cause:

NOX analyzer malfunction led to erroneous reporting of excess emissions because the analyzer was believed to be operating normally. On three consecutive days (Aug 26-28), the analyzer readings drifted overnight. As analyzer readings drifted, NOX emissions were believed to be rising. Furnace operating parameters remained unchanged during the periods of indicated excess, leading operations to suspect that the analyzer was malfunctioning each night.

Corrective Action or Preventive Steps Taken:

After calibration failed on the morning of August 29, the ozonator, capillaries, converter, and associated tubing were all replaced, and the analyzer was calibrated. NOX values no longer drifted overnight following repair of the analyzer, confirming that the excess emissions were erroneous.

Applicable Regulation / Permit Condition / Other:

BAAQMD 6-1-302, Title V-VI(11433)(2B)

Date Event
Started:

Date Event
Stopped:

08/29/2017

08/29/2017

Source (S#): S802

Abatement Device (A#): A30, S901

Emission Point (P#):

Event Description: Opacity from the FCCU / 7 Boiler stack exceeded 20% for more than 3 minutes in a one-hour period. The excess was reported as RCA 07E34. The District determined that No Further Action (NFA) was required on 10/19/2017.

Probable Cause:

The fuel gas chopper valve tripped while attempting to light a burner on 7 Boiler, which automatically de-energized the ESP.

Corrective Action or Preventive Steps Taken:

Opacity returned to normal as soon as all safety permissives were met, and the ESP was re-energized. The ESP was de-energized for approximately 3 minutes.

Applicable Regulation / Permit Condition / Other:

Title V-VI(11433)(2)

Date Event
Started:

Date Event
Stopped:

09/01/2017

09/01/2017

Source (S#): S802

Abatement Device (A#): A30, S901

Emission Point (P#):

Event Description: A particulate matter test was not completed during the month of August 2017 as required by Condition 11433, Part 2. The FCCU and 7 Boiler were in turnaround during much of August, and the units have both experienced operational challenges during restart. BAAQMD was notified via email on 8/31/2017.

Probable Cause:

The refinery was unable to stabilize operations of the FCCU and 7 Boiler prior to the end of the calendar month. The FCCU and 7 Boiler completed a major turnaround in mid-August. Both the FCCU and 7 Boiler experienced operational challenges following return to operation.

Corrective Action or Preventive Steps Taken:

Monthly testing resumed in September.

Applicable Regulation / Permit Condition / Other:

BAAQMD 6-1-302, Title V-VI(11433)(2B)

Date Event
Started:

Date Event
Stopped:

09/04/2017

09/04/2017

Source (S#): S802

Abatement Device (A#): A30, S901

Emission Point (P#):

Event Description: Opacity from the FCCU / 7 Boiler stack exceeded 20% for more than 3 minutes in a one-hour period. The excess was reported as RCA 07E43.

Probable Cause:

The electrostatic precipitator (ESPs) automatically tripped offline when it received a shutdown signal from the PLC. This caused opacity to increase from the shared FCCU / 7 Boiler stack. The automatic ESP shutdown prevents unsafe conditions from developing inside the ESP.

Corrective Action or Preventive Steps Taken:

Startup/shutdown procedures will be updated to bypass low-low FCCU Regenerator airflow alarm to prevent shutdown of ESP during startup and shutdown of the FCCU regenerator. Automatic ESP shutdown settings will be re-evaluated to determine if they need to be adjusted.

Applicable Regulation / Permit Condition / Other:

Title V-VI(19199)(H4)

Date Event
Started:

Date Event
Stopped:

09/04/2017

09/05/2017

Source (S#): S1106

Abatement Device (A#): A1106

Emission Point (P#):

Event Description: An indicated NOX emissions excess for Furnace F72 (S-1106) was reported to the District on 9/5/2017 as RCA 07E45.

Probable Cause:

The corrected NOX value used by I/A to control the ammonia injection rate to the SCR had flat-lined due to an analyzer alarm. The alarm was related to the temperature in the sample train. I/A assumed that the data being collected were not valid because of the alarm; however, the analyzer passed all daily validations.

Corrective Action or Preventive Steps Taken:

Operators manually adjusted the ammonia injection rate to the SCR to maintain compliance with the NOX emission limit. The corrected NOX value calculated by and used by I/A to control the ammonia injection rate to the SCR returned to normal once the analyzer alarm was cleared.

Applicable Regulation / Permit Condition / Other:

BAAQMD 6-1-302, Title V-VI(11433)(2B)

Date Event
Started:

Date Event
Stopped:

09/05/2017

09/05/2017

Source (S#): S802

Abatement Device (A#): A30, S901

Emission Point (P#):

Event Description: Opacity from the FCCU / 7 Boiler stack exceeded 20% for more than 3 minutes in a one-hour period. The excess was reported as RCA 07E46.

Probable Cause:

The electrostatic precipitator (ESPs) automatically tripped offline when it received a shutdown signal from the PLC. This caused opacity to increase from the shared FCCU / 7 Boiler stack. The automatic ESP shutdown prevents unsafe conditions from developing inside the ESP.

Corrective Action or Preventive Steps Taken:

Startup/shutdown procedures will be updated to bypass low-low FCCU Regenerator airflow alarm to prevent shutdown of ESP during startup and shutdown of the FCCU regenerator. Automatic ESP shutdown settings will be re-evaluated to determine if they need to be adjusted.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301

Date Event
Started:

Date Event
Stopped:

10/03/2017

10/04/2017

Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: A brief period of elevated H2S concentration was monitored at the Waterfront Rd GLM location, as reported to the Air District on 10/4/2017 as RCA 07E76. Winds were generally blowing from the west at the time the excess occurred

Probable Cause:

On operator drained a line containing ethyl mercaptan into a sump at the LPG Loading Rack in TRACT 3. The mercaptan caused false positive H2S readings at the GLM during periods when the winds were blowing from the direction of the loading rack.

Corrective Action or Preventive Steps Taken:

The line should have been drained to vapor recovery in accordance with procedures. The operator was counseled on the proper way to drain the line to vapor recovery.

Applicable Regulation / Permit Condition / Other:

Consent Decree (V)(E)(43)(b)

Date Event
Started:

Date Event
Stopped:

10/21/2017

10/28/2017

Source (S#): S802

Abatement Device (A#): A30, S901

Emission Point (P#):

Event Description: NOX emissions from the 7Boiler/FCCU exceeded 40 ppmvd @ 0% O2 (7-day average). The excess was reported on 10/24/2017 as RCA 07F03.

Probable Cause:

A power loss caused the shutdown of several process units and created a steam shortage within the refinery. The steam rate on 7 Boiler was rapidly increased to make up for the refinery-wide steam shortage and stabilize the operation of units with power. NOX emissions increased when the boiler duty increased.

Corrective Action or Preventive Steps Taken:

The cause of the power loss is under investigation. NOX emissions decreased after the steam rate on 7 Boiler was decreased.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301

Date Event
Started:

Date Event
Stopped:

10/23/2017

10/23/2017

Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: Elevated H2S concentrations were monitored at the Waterfront Rd GLM location, as reported to the Air District on 10/23/2017 as RCA 07E99.

Probable Cause:

False pressure indications sent to the vapor recovery system on Tank 943 resulted in the pressure in Tank 943 exceeding a PSV setpoint. The PSV on Tank 943 (high sulfur gas oil) was allowing vapors to escape during a period when the tank level was rising due to the false pressure indication provided to the vapor recovery system on the tank. Operators were investigating the source of hydrocarbon odor in the area of the tank when the GLM excess was recorded. An analysis of wind speed and direction confirm that Tank 943 was the cause of the GLM excess.

Corrective Action or Preventive Steps Taken:

The faulty pressure indicator was corrected and recalibrated. Pressure control on the tank allowed the PSV to re-seat once the pressure indications were corrected.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301

Date Event
Started:

Date Event
Stopped:

10/23/2017

10/24/2017

Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: Elevated H2S concentrations were monitored at the Waterfront Rd GLM location, as reported to the Air District on 10/24/2017 as RCA 07F01.

Probable Cause:

The monitored wind direction immediately preceding and during the period of excess indicates that the H2S originated offsite from the tidally influenced wetlands adjacent to the GLM, and that the Refinery did not emit the H2S that caused the recorded excess.

Corrective Action or Preventive Steps Taken:

The collected meteorological data and GLM data indicate that the H2S was not emitted by the Refinery.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301

Date Event
Started:

Date Event
Stopped:

10/24/2017

10/25/2017

Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: Elevated H2S concentrations were monitored at the Waterfront Rd GLM location, as reported to the Air District on 10/26/2017 as RCA 07F06.

Probable Cause:

The monitored wind direction immediately preceding and during the period of excess indicates that the H2S could have originated from a number of units onsite, and could have originated offsite from the tidally influenced wetlands adjacent to the GLM. Wind speeds were low, and the wind direction highly variable. No abnormal operating conditions within the Refinery were identified that might have caused or contributed to the excess. The Refinery does not believe that it emitted the H2S that caused the recorded excess.

Corrective Action or Preventive Steps Taken:

The Refinery believes that the H2S was emitted offsite by the tidally influenced wetlands located adjacent to the GLM.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301

Date Event
Started:

Date Event
Stopped:

10/25/2017

10/26/2017

Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: Elevated H2S concentrations were monitored at the Waterfront Rd GLM location, as reported to the Air District on 10/26/2017 as RCA 07F07.

Probable Cause:

The monitored wind direction immediately preceding and during the period of excess indicates that the H2S could have originated from a number of units onsite, and could have originated offsite from the tidally influenced wetlands adjacent to the GLM. Wind speeds were low, and the wind direction highly variable. No abnormal operating conditions within the Refinery were identified that might have caused or contributed to the excess. The Refinery does not believe that it emitted the H2S that caused the recorded excess.

Corrective Action or Preventive Steps Taken:

The Refinery believes that the H2S was emitted offsite by the tidally influenced wetlands located adjacent to the GLM.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301Date Event
Started: Date Event
Stopped:10/27/201710/27/2017Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: Elevated H2S concentrations were monitored at the Waterfront Rd GLM location, as reported to the Air District on 10/27/2017 as RCA 07F10.

Probable Cause:

Vapors were escaping from the bottom flange of PSV-220 on Tank 714 (spent acid tank). The bottom flange was leaking due to corrosion caused by corrosive vapors in the tank. An analysis of wind speed and direction confirm that Tank 714 was the likely cause of the GLM excess.

Corrective Action or Preventive Steps Taken:

The tank was "stilled" (no movement of material into or out of the tank) until a new PSV could be procured and installed. The PSV was replaced, and monitoring was performed to confirm that the new PSV was leak free.

Applicable Regulation / Permit Condition / Other:

BAAQMD Reg 2-1-302Date Event
Started: Date Event
Stopped:11/06/201711/06/2017Source (S#): S944, S945

Abatement Device (A#):

Emission Point (P#):

Event Description: NOV A56257 was issued on 11/06/2017 for installing a "Supplemental Gas System" on the North/South Steam Flares without a permit.

Probable Cause:

The District alleges that a "Supplemental Gas System" was installed on the North and South Steam Flares without prior approval. The District's conclusion is based on a fundamental misunderstanding of how refinery flares operate. "Supplemental Gas", a term defined by USEPA, has always been a part of flare operations. The fact that the refinery has never referred to a "Supplemental Gas System" in prior documents is because the phrase was adopted by USEPA in their consent decree, and is not an industry standard term. The refinery has always had the ability to add natural gas to the flare system in numerous locations throughout the system whenever needed to ensure safe and stable flare operations.

Corrective Action or Preventive Steps Taken:

The Refinery believes that the District should rescind NOV A56257.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-1-309Date Event
Started: Date Event
Stopped:12/06/201712/06/2017Source (S#): S1411Abatement Device (A#): A1403

Emission Point (P#):

A1417, A1421

Event Description: Emissions of SO2 from the Sulfuric Acid Plant (SAP) exceeded 300 ppm @12% O2. The excess occurred during unit startup which was subsequently aborted prior to successfully starting up the unit. The excess was reported as RCA 07F60 on 12/7/2017.

Probable Cause:

During a restart of the unit, reactor temperatures dropped below the temperature necessary to automatically sustain reaction. Attempts to increase reactor temperatures during the startup were not successful, and the startup was aborted and the unit feed stopped.

Corrective Action or Preventive Steps Taken:

Excess emissions ceased as soon as fresh feed to the unit was stopped, and the unit was shutdown. A second attempt to restart the unit was successfully performed without excess emissions.

Applicable Regulation / Permit Condition / Other:

Title V-VI(8077)(B7)(A)

Date Event
Started:

Date Event
Stopped:

12/14/2017

12/14/2017

Source (S#): S934, S935

Abatement Device (A#):

Emission Point (P#):

Event Description: An indicated excess of the 8-hour NOX emission limit was reported for Hydrocracker furnaces F-34/F-35. The indicated excess occurred during Hydrocracker unit startup, and was reported to the District on 12/15/2017 as RCA 07F72.

Probable Cause:

Faulty instrumentation on the Stage 1 HPS and LPS allowed water to carry over into the unit feed. The water caused the unit feed pumps to gas up as water in the feed flashed to steam. The reduced feed circulation rates through the furnaces prevented operations from increasing heat input and prolonged the period of curtailed operation during unit startup.

Corrective Action or Preventive Steps Taken:

The presence of water necessitated a prolonged startup to avoid tripping the unit. The emission excess ended after unit feed rates increased, allowing operations to increase furnace firing rates.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301

Date Event
Started:

Date Event
Stopped:

12/24/2017

12/24/2017

Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: A brief period of elevated H2S was monitored at the Chenery GLM. The 3-min average concentration exceeded 60 ppb for approximately 8 minutes. The excess was reported to the District on 12/27/2017 as RCA 07F79.

Probable Cause:

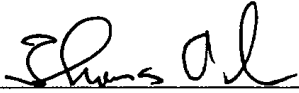
A LaGrangian backtrack was performed which shows that the refinery did not emit the H2S that caused the reported excess. The H2S was emitted either by the wetlands located northeast of the GLM site, or by the town of Clyde.

Corrective Action or Preventive Steps Taken:

None required. The refinery did not emit the H2S that caused the excess.

Certification Statement:

I certify under penalty of law that based on the information and belief formed after reasonable inquiry, the statements and information in this document and in all attachments and other materials are true, accurate, and complete.



Signature of Responsible Official

Thomas A. Lu

Print Name

Vice President,
Martinez Refinery

Title

1/26/2018

Date

nwb